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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/466,219 06/06/95 HANDEFIELD

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DER. W EXAMINER

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ART UNIT PAPER NUMBER

2214

5

DATE MAILED:

02/29/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

- ☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input checked="" type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948 |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-23 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. ☒ Claims 24-38 have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1-23 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☒ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

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Part III DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

Claims 1-23 are rejected under 35 U.S.C. § 103 as being unpatentable over Gerresheim et al. in view of Merz.

Gerresheim et al. teach, for example in Figure 2A and in columns 5-7, all of the essential features of the instant invention including a system for monitoring a parameter (e.g.,

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temperature or pressure) of a tire for a vehicle, said system comprising:

a sensor (12 or 13), disposed within a tire 10, for generating a signal indicative of the parameter (here, pressure) of the tire,

a transmitter (16 or 17), in electrical communication with the sensor (12 or 13) and with the first end of an electromagnetic path, for transmitting the electromagnetically generated signal along the electromagnetic path,

a receiver (18 or 21), in electrical communication with the second end of the electromagnetic path, for receiving a path signal at the electromagnetic path's second end, the path signal being responsive to the generating signal, and

a monitor 20, in electrical communication with the receiver (18 or 21), for monitoring the tire parameter by monitoring the path signal(s).

It is further noted that Gerresheim et al. teach the monitoring of both tire pressure and tire temperature, and also perform the step of comparing these parameters to selected threshold values (See, for example, figures 5 and 6 of Gerresheim et al).

It is noted, however, that Gerresheim et al. do not explicitly disclose that the electromagnetic path through which the electromagnetic signals are transmitted is necessarily formed

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of a plurality of conductive components of the vehicle, e.g., a wheel rim, one or more wheel bearings, etc. It is noted that Merz does teach, (for example in figure 2), a tire monitoring system wherein the electromagnetic path through which the electromagnetic signals are transmitted that is formed of a plurality of conductive components of the vehicle, e.g., a wheel rim, one or more wheel bearings, etc. In view of ~~the~~ this aforementioned teaching by Merz, ~~it~~ it would have been obvious to one of ordinary skill in the art at the time of the invention, notwithstanding the lack of an explicit disclosure in Gerresheim et al., to have arranged the transmitters (16 or 17) and receivers (18 or 21) of Gerresheim et al. so as to form an electromagnetic path through a plurality of conductive components of the vehicle, e.g., a wheel rim, one or more wheel bearings, etc., if desired. This is obvious because it allows for the placement of the transmitters (16 or 17) of Gerresheim et al. to be conveniently positioned on the inside base of the wheel rim, and it allows for the placement of the receivers (18 or 21) of Gerresheim et al. to be conveniently positioned across from the inside base of the wheel rim. Gerresheim et al. and Merz are combinable because each reference discloses an electromagnetic tire monitoring system.

Particular sensor structures (e.g., plate capacitive pressure sensors) in the tire monitoring system of Gerresheim et

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al. as modified by Merz are considered a matter of obvious choice in design clearly within the purview of one having ordinary skill in the art at the time of the invention inasmuch as a plethora of various sensor structures are notoriously well-known. Similarly, intermittent operation, e.g., only at periodic intervals, of the sensor in the tire monitoring system of Gerresheim et al. as modified by Merz is considered a matter of obvious choice in design clearly within the purview of one having ordinary skill in the art at the time of the invention, inasmuch as continuous operation is not always necessary and intermittent operation is advantageous because, for example, it saves fixed and variable operating expenses.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schmid et al. is cited as art of interest for its disclosure of a tire pressure detecting apparatus wherein sensors 13 and 14 are positioned on the inside base of the wheel rim.

Fema et al. is cited as art of interest for its disclosure of a system for monitoring parameters of tires on a moving vehicle wherein conductive components of the vehicle form part of the electromagnetic transmission path.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to William L. Oen whose telephone number is (703) 308-5161.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4900.



Wm L. Oen
February 16, 1996



RICHARD CHILCOT
SUPERVISORY PATENT EXAMINER
GROUP 2200